

Promoting Energy Efficient Lighting in Benin

Background

The consumption of modern energy in Benin is characterized by the total reliance on imported fuel oil and electricity, the increasing gap between demand and supply, the lack of reliability of the grid and the poor performance of equipment and appliances used by consumers. The national electricity utility, Société Béninoise d'Energie Electrique (SBEE), has 350,000 costumers and the total electricity consumption was estimated at 702 GWh in 2007 with the heaviest load stemming from the coastal area around Benin's capital Cotonou. Over the last two decades, electricity demand has continuously increased at a rate of about 7% per year.



Household equipment in Benin is generally energy inefficient, including air-conditioning, refrigeration and lighting equipment. Most light bulbs used by households are incandescent, leading to a significant gap between peak load and base load. Efficient light bulbs when available are of low quality, and cannot withstand the high voltage fluctuations to which the Beninese grid is subject. The lighting market is not structured and products and brands are imported from various countries. Air-conditioners are not subject to any regulation and the procurement of equipment is guided by low cost practices. Energy audits carried out in more than 60 public buildings indicated air-conditioning uses 50% to 70% of the total electricity consumed.

In March 2009, a detailed market study for lighting equipment was completed covering 4,500 households. The survey estimate indicates that 85% of CFLs are of low quality. For example, 82% of households surveyed suggested that the CFLs burned out in less than one month. While 32% of households use CFLs, 80% are thus not satisfied with the product. Moreover, many households who have used CFLs prefer to return to incandescent light bulbs due to this lack of quality. The key challenge in Benin's lighting sector is therefore in the area of quality control and awareness of best standards. A smaller survey among Government and hotels on the use of air conditioners revealed challenges of a different nature: while the air conditioners are being used for on average 10 hours a day, none of the parties surveyed knew about efficient air conditioning systems.

Objective

The objective of this project is to develop standards and labels for efficient light bulbs and air-conditioners in Benin, and to introduce efficient light bulbs to households through a bulk procurement scheme and awareness. The overall goal is improve reliability and access to modern energy services in Benin.

Project Component Activities

- Conduct workshops to raise awareness of energy efficiency issues and solutions amongst government agencies and standardization institutes.
- Develop and implement a marketing and promotion plan for EE lighting products and air-conditioners, as well as a consumer information campaign to raise consumer awareness.
- Train private market players (importers and distributors, retailers, etc.) in EE product dynamics.
- Replace 350,000 incandescent light bulbs with EE lighting products in the household sector.
- Develop labels and minimum energy performance standards for EE lights and air-conditioners.
- Develop and adopt a legal and regulatory framework for EE light bulb and air-conditioner standards and labelling, such as an energy efficiency law and procedures for product testing and development.
- Design and construct a national testing facility for EE lighting products.

Executing Partners/Agencies at National Level

The executing partner/agency in this project is the Energy Directorate of Benin.

Project Budget

GEF – US\$ 2 million (including PPG and agency fees); Co-financing – US\$ 2.35 million

Progress

- Initial contract for the supply of the 15,000 CFLs for the pilot phase was signed in 2011, but issues with supplier commitment stalled the process. Evaluation is currently underway for the second bid for the total of 350,000 CFLs.
- The preparation of the bid document for the acquisition of test and labelling equipment for the lamps is underway.

Activities	Timeframe	
CEO Endorsement (FSP)	May	2009
Implementation Start	April	2010
Mid-term Evaluation	June	2013
Project Closing Date	June	2015

Contact

World Bank
Ms. Paola Agostini
Africa Regional Coordinator, World Bank
Paola.Agostini@worldbank.org

